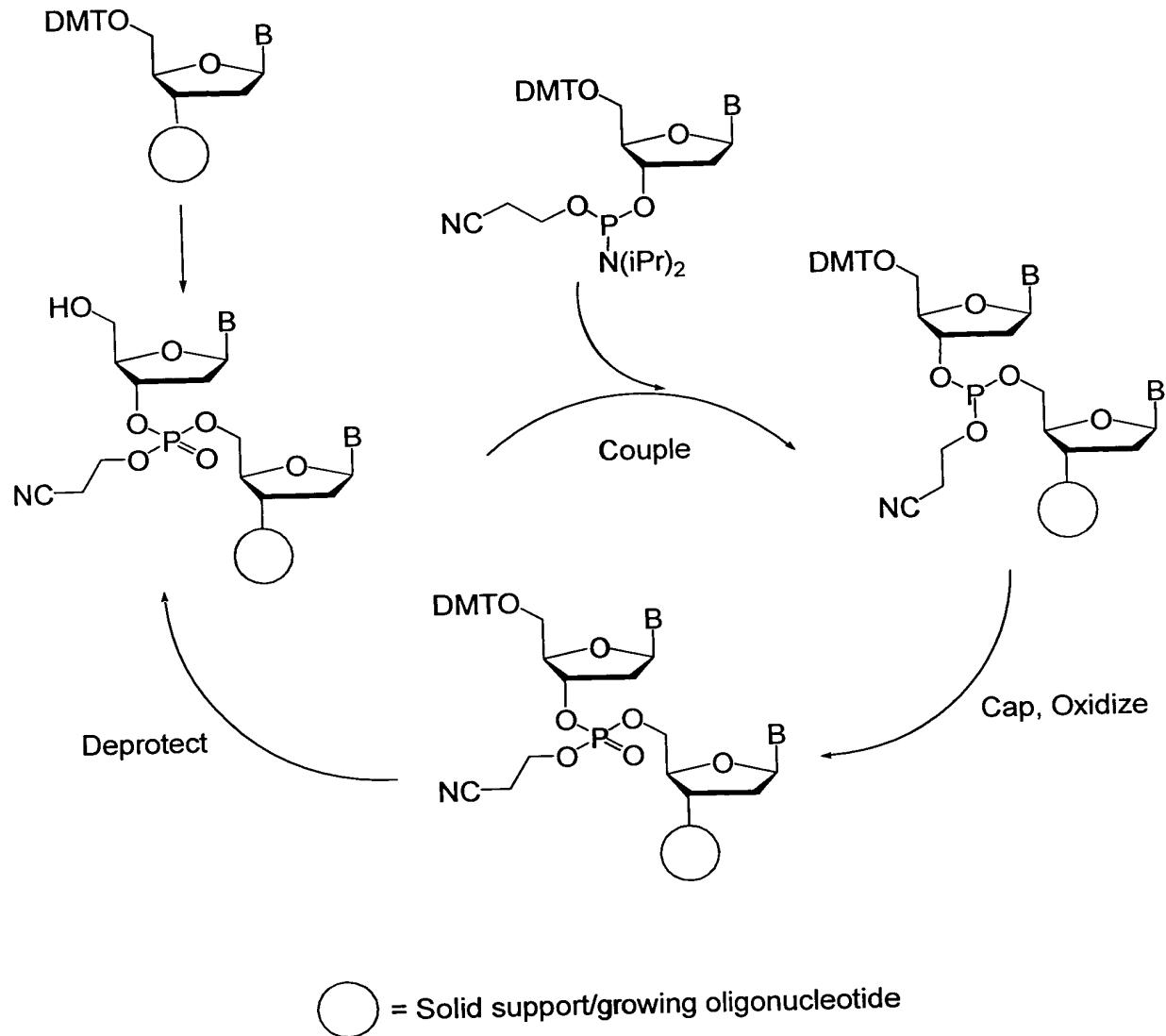


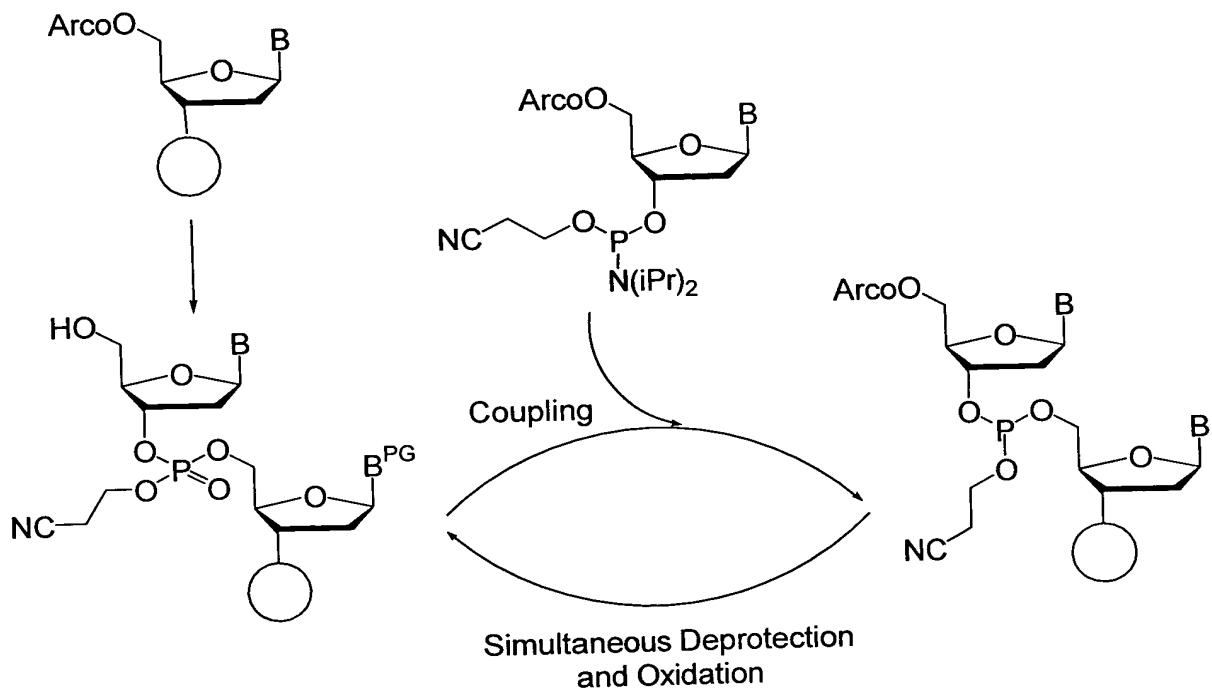
**FIGURE 1**

**3'-5' Synthesis With DMT Protection**

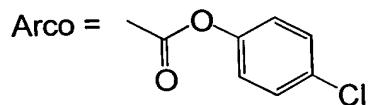


## FIGURE 2

### 3'-5' Synthesis With Carbonate Protection

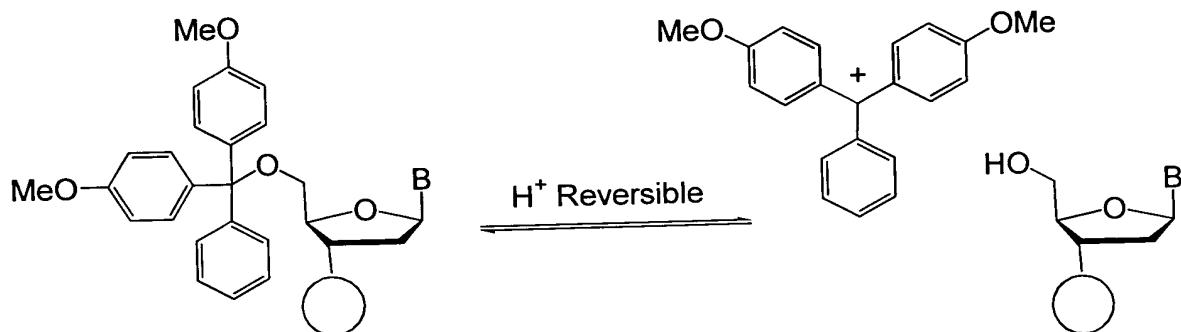


○ = Solid support/growing oligonucleotide

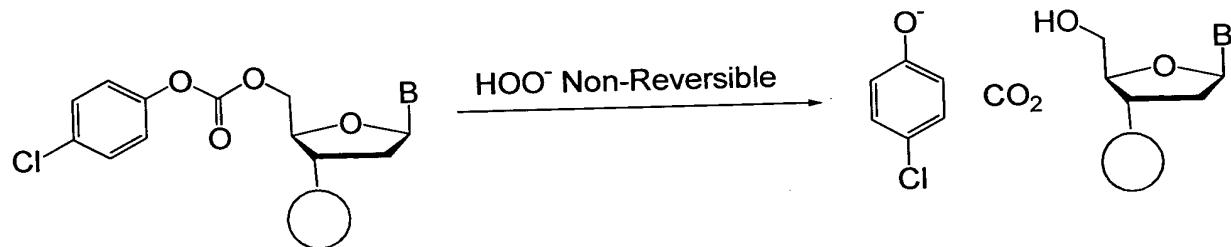


## Comparison of Deprotection Mechanisms

**FIGURE 3A**

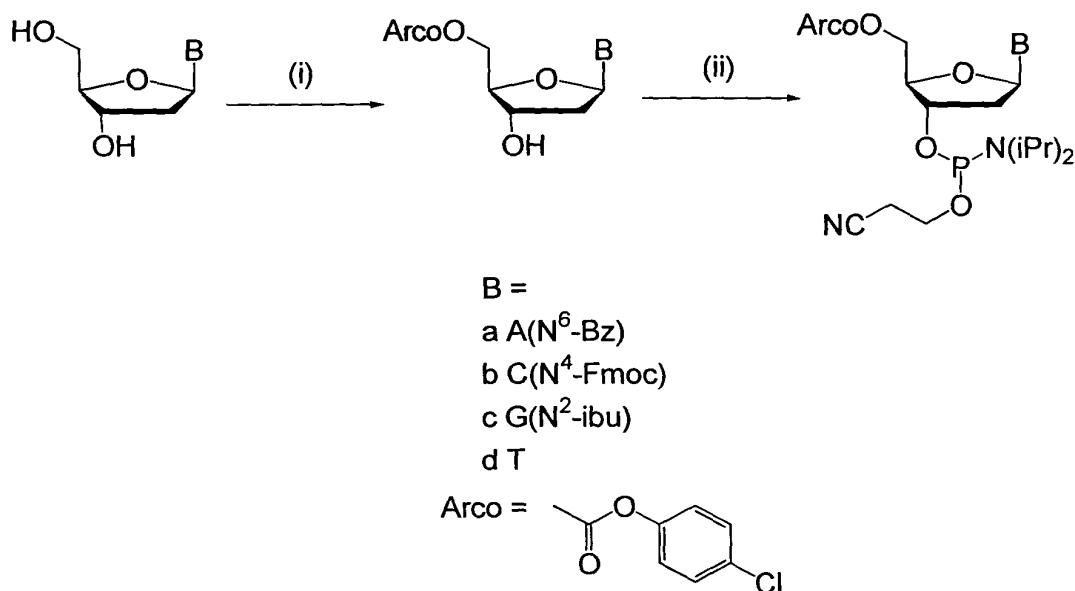


**FIGURE 3B**



**FIGURE 4**

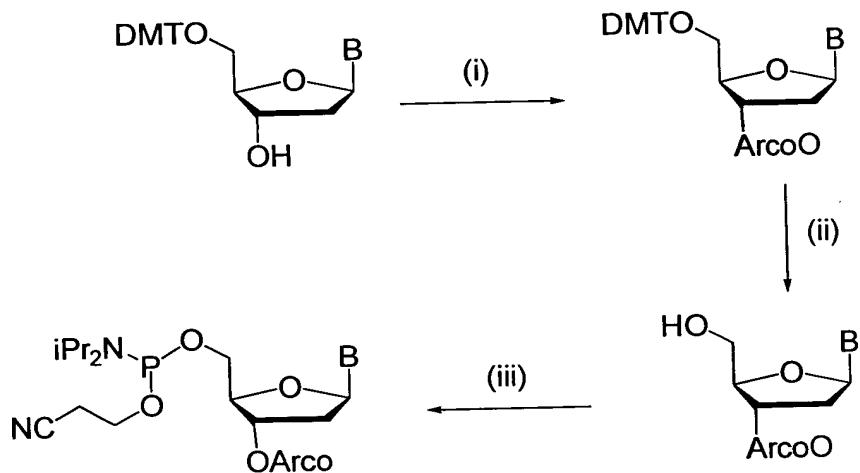
**5'-Arco-3'-Amidite Synthesis**



(i) 4-Chlorophenyl chloroformate/pyridine/2 h;  
(ii) (iPr<sub>2</sub>N)<sub>2</sub>PO(CH<sub>2</sub>)<sub>2</sub>CN/tetrazole/CH<sub>2</sub>Cl<sub>2</sub>/1 h.

## FIGURE 5

### 5'-Arco-3'-Amidite Synthesis

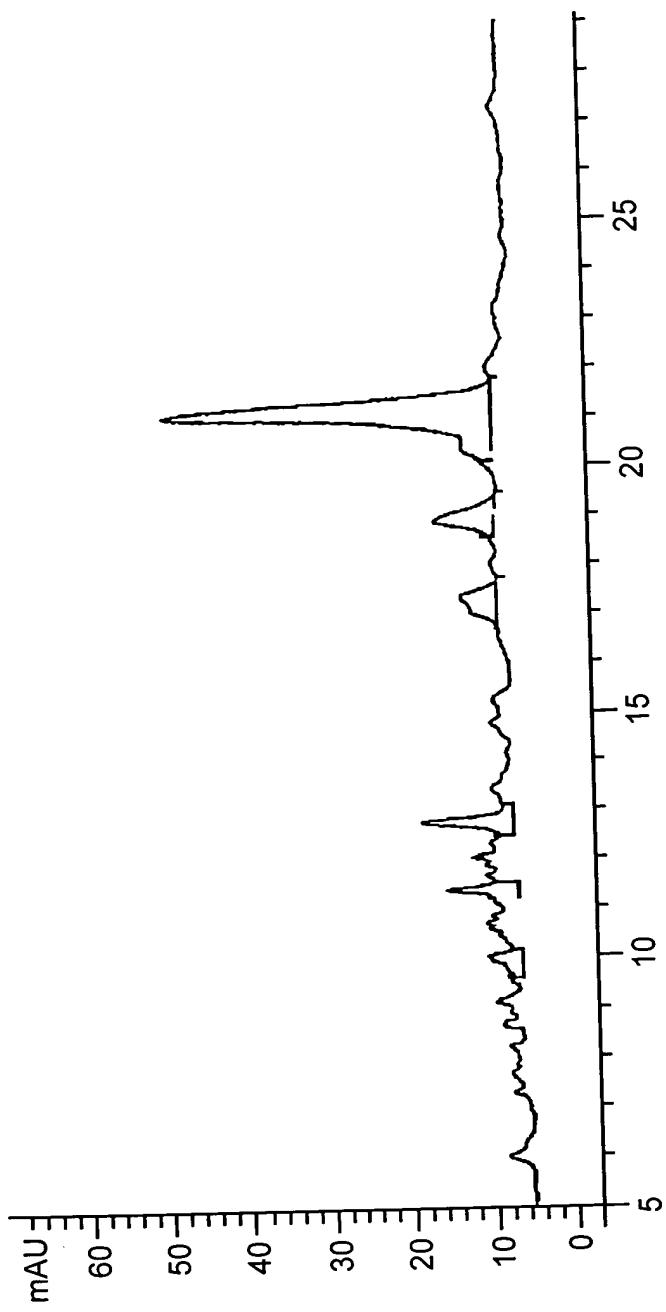


B =

- a A( $N^6$ -Bz)
- b C( $N^4$ -Fmoc)
- c G( $N^2$ -ibu)
- d T

- (i) 4-Chlorophenyl chloroformate/pyridine/2 h;
- (ii) 3% Trichloroacetic acid/CH<sub>2</sub>Cl<sub>2</sub>/3 min;
- (iii) (iPr<sub>2</sub>N)<sub>2</sub>PO(CH<sub>2</sub>)<sub>2</sub>CN/tetrazole/CH<sub>2</sub>Cl<sub>2</sub>/1 h.

**FIGURE 6**



**FIGURE 7**

